

INTERNATIONAL SEARCH REPORT

10/526572
Intern. Application No
PCT/EP 03/09780

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C12P1/04 C07K5/078 C12R1/01 A61K38/05 C12N1/20

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C07K C12N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, Sequence Search, BIOSIS

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>SASSE F ET AL: "TUBULYSINS, NEW CYTOSTATIC PEPTIDES FROM MYXOBACTERIA ACTING ON MICROTUBULI PRODUCTION, ISOLATION, PHYSICO-CHEMICAL AND BIOLOGICAL PROPERTIES"</p> <p>JOURNAL OF ANTIBIOTICS, JAPAN ANTIBIOTICS RESEARCH ASSOCIATION. TOKYO, JP, vol. 53, no. 9, September 2000 (2000-09), pages 879-885, XP009014740 ISSN: 0021-8820 the whole document</p> <p style="text-align: center;">----- -/--</p>	1-18

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the international search

13 April 2004

Date of mailing of the international search report

12. 08. 2004

Name and mailing address of the ISA

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	SOSIO M ET AL: "ARTIFICIAL CHROMOSOMES FOR ANTIBIOTIC-PRODUCING ACTINOMYCETES" NATURE BIOTECHNOLOGY, NATURE PUBLISHING, US, vol. 18, no. 3, March 2000 (2000-03), pages 343-345, XP001180029 ISSN: 1087-0156 abstract -----	1-18
A	DE 100 08 089 A (BIOTECHNOLOG FORSCHUNG GMBH) 31 October 2001 (2001-10-31) the whole document -----	1-18
A	REICHENBACH H: "MYXOBACTERIA, PRODUCERS OF NOVEL BIOACTIVE SUBSTANCES" JOURNAL OF INDUSTRIAL MICROBIOLOGY AND BIOTECHNOLOGY, BASINGSTOKE, GB, vol. 27, no. 3, 2001, pages 149-156, XP009027664 ISSN: 1367-5435 the whole document -----	1-18
A	DE 196 38 870 A (BIOTECHNOLOG FORSCHUNG GMBH) 26 March 1998 (1998-03-26) the whole document -----	1-18
A	REICHENBACH UND HÖFLE IN GRABLEY, SUSANNE; THIERICKE, RALF (EDS.): "Drug Discovery from Nature" 1999, SPRINGER-VERLAG BERLIN HEIDELBERG NEW YORK, XP0001180562 ISBN: 3-540-64844-5 Chapter 9 mainly 9.10 -----	1-18

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Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see supplemental sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-18 (partially)

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
☐ No protest accompanied the payment of additional search fees.

Box II

See supplemental sheet.

Box II, 4

1-18 (in part)

The International Searching Authority has determined that this international application contains multiple (groups of) inventions, namely:

Inventions 1-59:

- no. 1: claims 1-18 (in part) tubulysin-biosynthesis cluster;
- nos 2-17: claims 1-18 (in part) ssDNA molecule with ORF1-16;
- nos. 18-24: claims 1-18 (in part) ssDNA molecule with TubA, B, C, D, E, F, or Z and their corresponding domains;
- nos 25-59: claims 19-32 (in part) polypeptides defined by Seq. ID No. 2-17, 19-32, 34, 35, 36 or 38.

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
DE 10008089	A	31-10-2001	DE 10008089 A1	31-10-2001
DE 19638870	A	26-03-1998	DE 19638870 A1	26-03-1998
			AU 4555097 A	17-04-1998
			WO 9813375 A1	02-04-1998